دراسة العوامل المؤثرة فى إقبال الشباب على مشروعات إعادة تدوير المستهلكات المنزلية فى ضوء التنمية المستدامة

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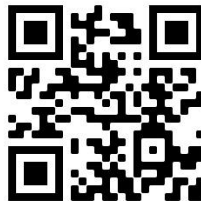
A study of youth Awareness Of Recycling Household Consumables To Establish Small Projects in The Light Of Sustainable Expansion

Abstract:

This current research aims to studying the youth awareness of recycling household consumables to establish small projects; in addition, this research has applied the research tools that consists of (general data form and measurement of youth awareness of recycling household consumables) on a research sample that consists of (224) youth who have been chosen in a purposeful and deliberate manner, but they must be attached to the university level, from Aswan university of both genders: males and females and they must be from different social and economic levels as it has been applied during September 2021. The results showed that there is a statistical difference at the level 0.01 among the youth in the research sample in awareness of recycling household consumables to establish small projects by applying the research tools according to a variable (gender for females), (residence for Rural youth) and (parents' education level for parents in higher education level) and (monthly income level for youth in families with high income level).

As researchers recommends: It is necessary to unite all concerned parties represented by the Medium, Small and Micro Enterprise Development Agency and the Ministry of Social Solidarity to overcome financial, administrative and social obstacles to enable young people to establish their own projects to reduce unemployment among them.

Key words: awareness, recycling household consumables, youth, sustainable Expansion.

Introduction and Research problem:

Recycling projects are micro-projects with a low investment cost and that achieve financial returns and profits on the one hand, and risk on the other hand, as they do not require huge funds (Thamer Al-Bakri, 2011).

Recycling consumables and producing new things instead of getting rid of them is considered one of the efforts that researchers strive to achieve all over the world to achieve sustainability, environment preservation and economic resources preservation (Safinaz Muhammad, 2020).

It is re-using, which means using the product for a second time, or giving it to another person who uses it and reuses it for a second time (Leonas & Karen K, 2016).

The recycling process includes all materials (paper, textiles, plastic, glass, etc…) and re-use these materials to produce new materials, sometimes of lower quality than the products they are made of (Awadi Mustafa, 2017).

The study (Sameh Shaheen, 2013) also emphasized the role of stimulating recycling projects to establish small or micro projects, as it has a reflection on economic development from the point of view of the owners of those small projects.

As recycling projects have a major role in acquiring technical and applied skills, many countries have succeeded in benefiting from the advantages of these projects by adopting this sector at the national level, as it is considered from the means of economic development (Hossam El-Adawy, 2020).

By achieving sustainable development, it achieves social security and economic development, and overcoming the problems that threaten human development as it achieves equality and equal opportunities, which are the most interests of researchers in societies (Agwu & Mba, Ok, 2014).

Sustainable Development aims that the current generation leaves for future generations a balance of resources similar to that inherited or better, it also strives to empower young people based on the characteristics that distinguish them at this stage of their lives, such as vitality and excitement, as they are the backbone of society (Abdul Rahman Al-Hassan, 2011).

It has become an urgent need to rationalize human interaction, because the existing modernity model that works to meet the current material needs with complete disregard for the environment and the future is no longer appropriate in The long-term (Nagla Al-Mashad, 2021).

Where the interest came in empowering youth, the maker of growth and development, as they are the main and prominent axis in making these changes. Therefore, it is necessary to empower them and develop their skills and abilities in order to respond to changes in the surrounding environment (Asmaa Idris et al., 2019).

Young people are more attracted to turn to recycling projects when they realize their importance as young people are always keen to have a positive role in serving their communities, and recycling activities have an innovative element that attracts young people to it (Aya Salem, 2017).

The study of (Rabab Mishaal and Nihad Rasas, 2018) considers that educated and conscious youth are the mainstay and change makers in society, and young people should be mobilized with their creative abilities in order to establish global projects to achieve sustainable development and ensure a better future for everyone.

Hence, it is necessary to focus on the targeted strategic dimensions of the recycling process, and what it can achieve of added value when used in the production processes carried out by business organizations. Therefore, it was necessary to address the role of factors affecting young people to advance this category in

our society because of their effective and influential role in the life of their family and in society as a whole as it is one of the main pillars of sustainable development. Through the foregoing, the researcher seeks to study the factors affecting the youth's demand for projects to recycle household consumables as young people in this age group characterized by strength and activity and can employ all their human and non-human resources. Therefore, young people must be urged to take up productive projects that have a major role in economic development and raising their standard of living. Hence.

the research problem determined by answering the following questions:

1- What are the relative weights of the most influential factors in the youth's demand for household consumables recycling projects?

2- What are the differences in the responses of the youth of the research sample to the axes of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to gender variables?

3- What are the differences in the responses of the youth of the research sample on the axes of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the variables of residence?

4- What are the differences in the responses of the youth of the research sample on the axes of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the specialization?

5- What are the differences in the responses of the youth of the research sample to the axes of the factors affecting the youth's demand for household consumables recycling

projects (economic, cultural, environmental) according to the monthly income of the family?

Research objectives:

The current study aims mainly to studying the factors affecting the youth's demand for recycling projects, through:

1- Determining the participation rate of factors affecting youth demand for household consumer recycling projects.
2- Determining the differences in the responses of the youth of the research sample to the axes of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to gender variables.
3- Determining the differences in the responses of the youth of the research sample to the axes of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the residence variables.
4- Determine the differences in the responses of the youth of the research sample, the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the specialization variable.
5- Determining the differences in the responses of the youth of the research sample, the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the family's monthly income variable.

Research significance:

1- Studying the factors affecting the youth's interest in household consumables recycling projects.
2- Understand the importance of optimal use of household consumables to prepare new sustainable products.

3- Raising the standard of living through the establishment of small projects from recycling household consumables.

4- It is an addition to a library specializing in home and institutional management, by shedding light on a relatively thorny topic, which is the establishment of small projects from household consumables to develop society and increase national income.

Research hypothesis:

Current research assumes the following:

1- The relative weights of the most influential factors in the youth's demand for recycling projects (economic, cultural, and environmental) differ.

2- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to gender variables.

3- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the variables of place of residence.

4- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the specialization variable.

5- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for household consumables recycling projects (economic,

cultural, environmental) according to the family's monthly income variable.

Method of the research:

First: Research methodology:

(Mohamed Shafiq, 2006) defines the descriptive analytical approach as collecting information and data accurately about a specific phenomenon or topic during a specific period of time to reach practical results that are interpreted in an objective manner. The descriptive approach is not limited to data collection, classification and analysis, but also includes some interpretation of these results and then reaching generalizations about the phenomenon under study.

Second: Procedural terms and definitions:

1. **household consumables Recycling**: It is the process of reusing waste (household or industrial) to reduce its negative impact on the environment and is done by separating these wastes and then re-manufacturing each separately (Hanan Yashar, 2011).

The researchers define it procedurally as the youth's use of household consumables (fabrics, wood, plastic) and reproducing and transforming into marketable products.

2. **Sustainable development:** it is permanence, continuity and extension between different generations, which means that the current generation must leave to future generations a sufficient stock of resources and an environmental system that is not affected by pollution and non-destructive, as well as an adequate level of technology so that generations can benefit from the various benefits of development and the ability to continue in it (Amani Jarrar, 2018).

Researchers define it procedurally as a comprehensive development process for the entire community, as well as businesses and projects, provided that they meet the needs of the

present and future generations, with the aim of raising the standard of living for youth, the family and society as a whole.

3. **The concept of youth stage:** The college youth is defined as everyone who joins the university with the aim of obtaining a scientific degree and is taught some kinds of knowledge and acquires some scientific and social skills (Ramadan Abdel Aziz, 2020).

The researchers procedurally define the youth stage as the stage that is characterized by many characteristics, needs and many problems, the young man is able and willing to work and has a great deal of responsibility and assistance in serving his family, they seek to raise their standard of living, the youth group is in the age period from 20 to 24 years , they have one Education level, which is the university level, and they differ in the living area (village or urban).

Third: Research limitation:

Geographical scope: The research sample was selected from university youth enrolled at Aswan University.

Human scope:

The research sample consists of two groups which are:

❖ **Exploratory research sample:** It consisted of (30) young people in the study, and they were chosen in a purposeful and deliberate manner so that they meet the characteristics of the basic sample for research in order to codify the study tools.

❖ **Main research sample:** It consisted of (224) university students who were chosen in a purposeful and deliberate manner, but they must be enrolled in the university level at Aswan University, of both genders: males and females and that they are from different social and economic levels.

Time scope:

The tools and standards of the current study were applied on university youth of the research sample, during the period of September 2021.

Fourth: research tools:

research tools include:

1) General data form (prepared by researchers)

2) Factors affecting youth's demand for recycling projects (economic, cultural, environmental). (prepared by researchers)

To prepare this measure, the researchers followed the following steps:

✓ The references, research and previous studies that talk about recycling projects and small projects were reviewed in order to benefit from them in setting the measure.

✓ This measure was prepared in the light of readings, previous studies, and the procedural concept of the factors affecting youth demand for recycling projects to set up small projects. The questionnaire in its final form included (39) news phrases covering all the axes of awareness of recycling household consumables divided into three axes as follows

Economic factors include (13) phrases, cultural factors include (13) phrases, environmental factors include (13) phrases, and the correction key of the scale is placed, and the phraseological responses to this scale are determined according to three responses (yes, to some extent, no) and on a continuous gradient scale (1, 2, 3) respectively In order to respond to positively worded phrases, grades (1, 2, 3) are given in order to respond to negatively worded phrases, so the scale is prepared for application to the main research sample .

Legalization of study tools: is meant to measure the honesty and stability of tools.

To calculate the truthfulness of the questionnaire: the current research in verifying the truthfulness of the questionnaire relied on two methods:

a) Content validity:

And to verify the validity of the scale and the appropriateness of the phrases and their formulation for the purpose for which they were developed.

- The scale was presented in its initial form to a group of (11) arbitrator professors to ascertain the suitability of the phrases to the goal that was set to measure it. Letters were sent to the members of the jury in the field of managing family and childhood institutions at the Faculty of Home Economics - Helwan University, and the Department of Home Economics at the Faculty of Specific Education in Fayoum University , the Department of Home Economics at the Faculty of Specific Education in Aswan, the Department of Curricula and Teaching Methods at the Faculty of Education at Fayoum University and the Department of Home Economics at the Faculty of Specific Education in Minya University.

b) Internal consistency validity:

First: Calculating the correlation coefficients between the degree of each of the expressions that make up each axis, and the total score of the axis on the scale.

The first axis: economic factors:

The validity was calculated using the internal consistency by calculating the correlation coefficient (Pearson correlation coefficient) between the degree of each phrase and the degree of the axis (economic factors) and the following table illustrates this:

Table (1) values of the correlation coefficients between the degree of each statement and the degree of the axis

(economic factors)

No.	Correlation	significance	No.	significance	significance
-1	0.794	0.01	-8	0.825	0.01
-2	0.857	0.01	-9	0.708	0.01
-3	0.607	0.05	-10	0.916	0.01
-4	0.942	0.01	-11	0.767	0.01
-5	0.889	0.01	-12	0.615	0.05
-6	0.632	0.05	-13	0.835	0.01
-7	0.736	0.01			

It is clear from the table that the correlation coefficients are all significant at the level (0.01 - 0.05) because they are close to one without fractures, which indicates the validity and homogeneity of the scale expressions.

The second axis: cultural factors:

The validity was calculated using internal consistency by calculating the correlation coefficient (Pearson correlation coefficient) between the degree of each phrase and the degree of the axis (cultural factors), and the following table illustrates this:

Table (2) values of the correlation coefficients between the degree of each statement and the degree of the axis

(cultural factors)

No.	correlation	Significance	No.	correlation	Significance
-1	0.921	0.01	-8	0.864	0.01
-2	0.742	0.01	-9	0.629	0.05
-3	0.899	0.01	-10	0.604	0.05
-4	0.774	0.01	-11	0.955	0.01
-5	0.808	0.01	-12	0.782	0.01
-6	0.713	0.01	-13	0.636	0.05
-7	0.643	0.05			

It is clear from the table that the correlation coefficients are all significant at the level (0.01 - 0.05) because they are close to one without fractures, which indicates the validity and homogeneity of the scale expressions.

The third axis: environmental factors:

The validity was calculated using internal consistency by calculating the correlation coefficient (Pearson correlation coefficient) between the degree of each phrase and the degree of the axis (environmental factors), and the following table illustrates this:

Table (3) values of the correlation coefficients between the degree of each statement and the degree of the axis

(environmental factors)

No.	correlation	significance	No.	correlation	significance
-1	0.843	0.01	-8	0.625	0.05
-2	0.617	0.05	-9	0.878	0.01
-3	0.729	0.01	-10	0.909	0.01
-4	0.936	0.01	-11	0.792	0.01
-5	0.644	0.05	-12	0.853	0.01
-6	0.815	0.01	-13	0.914	0.01
-7	0.751	0.01			

It is clear from the table that the correlation coefficients are all significant at the level (0.01 - 0.05) because they are close to one without fractures, which indicates the validity and homogeneity of the scale expressions.

Second: Validity using the internal consistency between the total score for each axis and the total score for the scale:

The validity was calculated using the internal consistency by calculating the correlation coefficient (Pearson correlation coefficient) between the total score for each axis (economic factors - cultural factors - environmental factors) and the total

score for the questionnaire of factors affecting the demand of youth to recycling projects, the following table illustrates this

Table (4) values of the correlation coefficients between the total score for each axis (economic factors - cultural factors - environmental factors) and the total score for the questionnaire of the factors affecting the youth's interest in recycling household consumables projects

Axes	correlation	significance
First axis: economic factors	0.738	0.01
Second axis: cultural factors	0.824	0.01
Third axis: environmental factors	0.706	0.01

It is clear from the table that all the correlation coefficients are a function at the level (0.01) because they are close to one without fractures, which indicates the validity and homogeneity of the questionnaire axes.

Calculation of Scale Stability:

Stability means the accuracy of the test in measurement and observation, its non-contradiction with itself, and its consistency and persistence in what it provides us with information on the conduct of the tester, which is the ratio between the degree variation on the scale that indicates the actual performance of the tester, the stability has been calculated for each axis of the questionnaire of the factors affecting the youth's demand for household consumables recycling projects; in addition to the scale's total score, the stability of the scale's total score was calculated using four methods:

1. Alpha Cronbach method
2. Split-half method
3. spearman brown method
4. Guttman method

Table (5) stability factor values for the survey of factors affecting youth demand of the basic research sample on the establishment of household consumables recycling projects

Axes	Alpha	Split-half	Spearman brown	Guttman
First axis: economic factors	0.809	0.766	0.841	0.793
Second axis: cultural factors	0.772	0.732	0.813	0.761
Third axis: environmental factors	0.915	0.870	0.956	0.908
The stability of the factors affecting the youth's demand scale for household consumables recycling projects as a whole	0.846	0.802	0.884	0.831

It is clear from the previous table that all the values of the stability coefficients: alpha coefficient, split-half, Spearman-Brown, Guttman function at the 0.01 level, which indicates the stability of the scale.

Conducting statistical analyses:

After collecting and unpacking the data, statistical processing was carried out using the computer program Package for Social Sciences Program (S.P.S.S) Statistical to perform the following statistical analyses: calculation of repetitions and percentages of study variables, calculation of stability coefficients of study measures by alpha Cronbach, split-half, guttman ,spearbrown and Pearson correlation coefficient to calculate the degree of correlation between study variables, and one Way Anova variance analysis using the F test. test, use test (L.S.D) for multiple comparisons to recognize the significance of differences between averages, Test "t", and analyze multiple regression using step forward.

Results: analyzed and interpreted:
First: descriptive results:

- **description of the research sample**:

The following is a comprehensive description of the research sample shown in tables 6 to 9 in terms of:

1. gender:

Table (6) Distribution of the Main research sample personnel according to the gender variable: No.=224

gender	number	percentage
Mal	73	%32.6
Femal	151	%67.4
Total	224	%100

It is evident from Table (6) that 151 of the research sample members are females, representing 67.4%, while 73 of the research sample members are males, representing 32.6%.

2. place of residence:

Table (7) distribution of main research sample personnel according to the variable of residence: No.=224

Residence	number	percentage
Rural areas	106	%47.3
Urban	118	%52.7
Total	224	%100

Table 7 shows that 118 members of the research sample are urban residents (52.7%), while 106 members of the research sample are rural residents (47.3%).

3. Specialization:

Table (8) distribution of main research sample personnel according to the specialization variable: No.=224

Specialization	number	percentage
Theoretical	136	%60.7
Practical	88	%39.3
Total	224	%100

It is evident from Table (8) that 136 of the research sample members have theoretical colleges with a percentage of 60.7%, while 88 of the research sample members have practical colleges with a percentage of 39.3%.

4. Family's monthly income:

Table (9) Distribution of the basic research sample personnel according to the monthly income of the family: No.=224

Family monthly income	number	percentage
Less than 5000	99	%44.2
From 5000 to 8000	82	%36.6
More than 8000	43	%19.2
Total	224	%100

It is clear from Table (9) that the largest monthly income categories for the families of the research sample were in the category (less than 5,000 pounds) and their percentage amounted to 44.2%, then families with incomes (from 5,000 pounds to 8000 pounds), where their percentage reached 36.6%, and finally families with income (more than 8000 pounds), where their percentage reached 19.2%.

Second: The results according to research hypotheses:

The first hypothesis:

the relative weights of the priority factors that affecting the youth's demand for recycling projects to establish small projects vary

To verify this hypothesis, the following table of relative weight was prepared:

Table (10) the relative weight of the priority of factors affecting the demand of young people to household consumables recycling projects

Factors affecting the youth demand for household consumables recycling projects	Relative weight	percentage	ranking
Economic factors	261	%32.9	second
Cultural factors	292	%36.9	first
Environmental factors	238	%30.1	third
Total	791	%100	

It is clear from the previous table that the priority of factors affecting young people's demand for recycling projects for household consumables was cultural factors with a rate of 36.9%, and then economic factors with a percentage of 32.9%, and environmental factors at a rate of 30.1% in the third place.

The second hypothesis:

There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors influencing the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to gender variables.

To verify this hypothesis, a T-test was applied, and the analysis of variance was calculated for the scores of the sample personnel of the factors affecting the youth's demand for household consumables recycling projects, and the following table illustrates this:

Table (11) The significance of the differences between the mean scores of the sample personnel on the axes of the scale of the factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to the gender variable

Axes of the scale	Gender	Averagescore	Standard deviation	sample	Degrees of freedom	T test	significance
Economic factors	Male	22.364	2.351	73	222	12.257	Significant at 0.01 for females
	Female	35.521	3.159	151			
Cultural factors	Male	23.791	2.513	73	222	13.444	Significant at 0.01 for females
	Female	36.145	3.470	151			
Environmental factors	Male	27.439	2.501	73	222	7.441	Significant at 0.01 for females
	Female	35.582	3.642	151			
The scale as a whole	Male	73.594	6.539	73	222	29.536	Significant at 0.01 for females
	Female	107.248	8.972	151			

It is clear from the table that the value of (T) was (12.257) for the economic factors axis, which is a statistically significant value at the level of significance (0.01) in favor of females. Where the average score for females was (35,521), while the average score for males was (22.364), which indicates that females had more economic factors than males.It is clear that the value of (T) was (13.444) for the axis of cultural factors, which is a statistically significant value at the level of significance (0.01) in favor of females, where the average degree of females was (36.145), while the average degree of males was (23.791), which indicates that females had more cultural factors than males.

It is clear from the table that the value of (T) was (7.441) for the environmental factors axis, which is a statistically significant value at the level of significance (0.01) in favor of females, where

the average degree of females was (35,582), while the average degree of males was (27.439), which indicates that Females had more environmental factors than males.

It is clear from the table that the value of (T) for the scale as a whole was (29.536), which is a statistically significant value at a significance level of (0.01) in favor of females, where the average degree of females was (107.248), while the average degree of males was (73,594), which indicates that the factors affecting the demand of females for household consumables recycling projects more than males due to the fact that they are more affected by household consumables than males and that females use and consume household products more than males use products and are more aware of ways to recycle them This is consistent with the result of Najwa Al-Taeb's study (2018), which clarified the importance of training youth to achieve sustainable development in all its dimensions.

The third hypothesis:

There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of the factors affecting the youth's demand for projects for recycling household consumables (economic, cultural, environmental) according to the variables of place of residence.

To verify this hypothesis, a T-test was applied, and the analysis of variance was calculated for the scores of the sample personnel of the factors affecting youth's demand for projects for recycling household consumables, and the following table illustrates this:

Table (12) indication of the differences between the average scores of individuals' statistical sample research on the axes of the scale of factors affecting the youth demand for recycling projects of household consumption (economic, cultural, environmental) according to the variable of residence

Axes of the scale	Residence	Mean	Standard deviation	sample	Degrees of freedom	T test	significance
Economic factors	rural	18.736	1.779	106	222	10.156	Significant at 0.01 in favor of urban
	urban	30.778	3.302	118			
Cultural factors	rural	33.621	3.271	106	222	10.156	Significant at 0.01 in favor of urban
	urban	25.528	2.034	118			
Environmental factors	rural	37.214	3.957	106	222	10.359	Significant at 0.01 in favor of urban
	urban	24.163	2.312	118			
The scale as a whole	rural	89.571	7.635	106	222	8.214	Significant at 0.01 in favor of urban
	urban	80.469	7.011	118			

It is clear from the table that the value of (T) was (10.156) for the economic factors axis, which is a statistically significant value at the level of significance (0.01) in favor of the urban sample personnel, where the average degree of the urban sample personnel reached (30.778), while the average degree of the resident sample reached In the countryside (18,736), which indicates that the individuals of the sample residing in the urban areas had more economic factors than the individuals of the sample residing in the countryside.

it is clear from the table that the value of (T) was (8.446) for the axis of cultural factors, which is a statistically significant value at the level of significance (0.01) in favor of The sample personnel residing in the countryside, where the average score of the sample personnel residing in the countryside reached (33.621), while the

average score of the sample members residing in urban areas was (25,528), which indicates that the sample individuals residing in the countryside had more cultural factors than the sample individuals residing in urban areas.

It is clear from the table that the value of (T) was (10.359) for the environmental factors axis, which is a statistically significant value at the level of significance (0.01) in favor of the sample personnel residing in the countryside, where the average score of the sample personnel residing in the countryside was (37,214) while the average score of the urban resident sample reached (24.163), which indicates that the sample personnel residing in the countryside had more environmental factors than the sample personnel residing in urban areas, which indicates that the sample personnel residing in the countryside had greater awareness of household consumption recycling projects than the sample personnel residing in urban areas.

 The value of (T) was (8.214) for the scale as a whole, which is a statistically significant value at a significance level of (0.01) in favor of the sample personnel residing in the countryside, where the average score of the sample personnel residing in the countryside was (89,571), while the average score of the sample residing in urban areas was (80,469). This indicates that the sample residing in the countryside had more factors influencing their demand for recycling projects than the sample residing in urban areas.

The researcher attributed this to the fact that the youth lived in the countryside are the most attracted towards establishing recycling projects and exploiting the environment surrounding them and the community. unemployment is highly concentrated in urban areas, and the difference in residence is due to a difference in the social and cultural level as urban life differs from the countryside, as it is more open and luxurious than the countryside (rural area) as the results of this study agree with the study of Tahani Al-Ajaji, Tahani Al-Qadiri (2017).

The fourth hypothesis: There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of the factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to the variables of specialization.

To verify this hypothesis, a T-test was applied, and the analysis of variance was calculated for the scores of the sample individuals in the factors affecting youth's demand for projects for recycling household consumables, and the following table illustrates this

Table (13) the significance of the differences between the mean scores of the research sample personnel on the axes of the factors affecting the youth's demand for projects for recycling household consumables (economic, cultural, environmental) according to the specialization variable

Scale of the axes	Specialization	Mean score (average)	Standard deviation	sample	Degrees of freedom	T test	Significance
Economic factors	theoretical	24.193	2.487	136	222	8.865	Significant at 0.01 in favor of practical
	practical	32.410	3.324	88			
Cultural factors	theoretical	26.864	2.513	136	222	9.637	Significant at 0.01 in favor of practical
	practical	37.521	3.624	88			
Environmental factors	theoretical	20.573	2.351	136	222	11.203	Significant at 0.01 in favor of practical
	practical	31.229	3.280	88			
Scale as a whole	theoretical	71.630	6.552	136	222	27.769	Significant at 0.01 in favor of practical
	practical	101.160	9.436	88			

It is clear from the table that the value of (T) was (8.865) for the economic factors axis, which is a statistically significant value at the level of significance (0.01) in favor of the sample personnel of

practical specialties, where the average degree of the sample personnel of practical specialties was (32.410), while the average degree of the sample personnel of theoretical specialties was (24.193), which indicates that the sample personnel of the practical majors had more economic factors than the sample personnel of the theoretical majors.

It is clear from the table that the value of (T) was (9.637) for the axis of cultural factors, which is a statistically significant value at the level of significance (0.01) in favor of the sample personnel of practical specialties, where the average degree of the sample personnel of practical specialties was (37,521) while the average degree of the sample personnel of theoretical specialties was (26,864), which indicates that the sample personnel of the practical majors had more cultural factors than the sample personnel of the theoretical majors.

It is clear from the table that the value of (T) was (11.203) for the environmental factors axis, which is a statistically significant value at the level of significance (0.01) in favor of the sample personnel of practical specialties, where the average degree of the sample personnel with practical specializations was (31.229), while the average degree of the sample personnel of theoretical specializations was (20.573), which indicates that the sample personnel of the practical specializations had more environmental factors than the sample personnel of the theoretical specializations.

It is clear from the table that the value of (T) was (27.769) for the scale as a whole, which is a statistically significant value at the level of significance (0.01) in favor of individuals of practical specializations, where the average degree of the sample personnel of practical specialties (101,160), while the average degree of the sample personnel of theoretical specializations (71,630), which indicates that the sample personnel of practical specializations the factors affecting their demand for projects for recycling household consumables more than the sample personnel of theoretical

specializations, and the study of Amal Mahmoud (2020) agrees with it, as they are more educated and aware of the factors affecting recycling projects.

Fifth Hypothesis: There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for recycling projects (economic, cultural, environmental) according to the family's monthly income variable.

To verify this hypothesis, the (F) test was applied, and the analysis of variance was calculated for the scores of the sample members in the axes of the scale of factors influencing youth's demand for recycle household consumables projects, and the following tables illustrate this:

Table (14) Analysis of the variance of the responses of the sample personnel on the axes of the scale of the factors affecting the youth's demand for household consumables recycling projects (economic, cultural, environmental) according to the family's monthly income variable

Axes of the scale	Family monthly income	Sum of squares	Average squares	Degrees of freedom	F test	significance
Economic factors	Between groups	12533.366	6266.683	2	48.115	Significant at 0.01
	Inside groups	28783.832	130.244	221		
	Total	41317.198		223		
Cultural factors	Between groups	11970.850	5985.425	2	32.400	Significant at 0.01
	Inside groups	40826.798	184.737	221		
	Total	52797.648		223		
Environmental factors	Between groups	11762.954	5881.477	2	36.018	Significant at 0.01
	Inside groups	36088.084	163.294	221		
	Total	47851.038		223		
The scale as a whole	Between groups	12694.313	6347.157	2	54.406	Significant at 0.01
	Inside groups	25782.674	116.664	221		
	Total	38476.987		223		

It is clear from the table that the value of (F) was (48.115) for the axis of economic factors, and it is a statistically significant value at the level (0.01), which indicates that there are differences between the degrees of the sample personnel in the economic factors according to the family's monthly income variable.

It is clear from the table that the value of (F) was (32.400) for the axis of cultural factors, and it is a statistically significant value at the level (0.01), which indicates that there are differences between the degrees of the sample personnel in the cultural factors according to the family's monthly income variable.

It is clear from the table that the value of (F) was (36.018), which is a statistically significant value at the level (0.01), which indicates that there are differences between the degrees of the sample personnel in the environmental factors according to the family's monthly income variable.

it is clear from the table that the value of (F) was (54.406) for the scale as a whole, and it is a statistically significant value at the level (0.01), which indicates

that there are differences between the degrees of the sample personnel in the factors affecting the youth's interest in recycling projects for household consumables according to the family's monthly income variable, and to find out the direction of the significance, the LSD test was applied for multiple comparisons and the following table explains it:

Table (15) The significance of the differences of the degrees of the sample personnel in the factors affecting the youth's demand for recycling projects for household consumables according to the family's monthly income variable

Axes of the scale	Family monthly income	Lower M=22.456	Moderate M=30.221	higher M=37.779
Economic factors	lower	-		
	moderate	**٧.٧٦٥	-	
	higher	**١٥.٣٢٣	**٧.٥٥٨	-
Cultural factors	Family monthly income	Lower M=23.041	Moderate M=25.578	higher M=35.222
	lower	-		
	moderate	*٢.٥٣٧	-	
	higher	**١٢.١٨١	**٩.٦٤٤	-
Environmental factors	Family monthly income	lower M=22.103	Moderate M=24.591	higher M=35.005
	lower	-		
	moderate	*٢.٤٨٨	-	
	higher	**١٢.٩٠٢	**١٠.٤١٤	-
The scale as a whole	Family monthly income	lower M=67.600	moderate M=80.390	higher M=108.006
	lower	-		
	moderate	**١٢.٧٩٠	-	
	higher	**٤٠.٤٠٦	**٢٧.٦١٦	-

It is clear from the table that there are differences in the economic factors between sons in families with high incomes and both sons in families with medium and low incomes in favor of sons in families with high incomes at the level of significance (0.01), and there are also differences between sons in families with medium incomes and sons in families with low incomes in favor of sons in families with middle income at the significance level (0.01) then sons from high-income families come first, as their economic

factors were greater, then sons from middle-income families in second place, and finally, sons from low-income families.

It is clear from the table that there are differences in cultural factors between sons in families with high incomes and both sons in families with medium and low incomes in favor of sons in families with high incomes at the level of significance (0.01), while there are differences between sons in families with medium incomes and sons in families with low incomes in favor of sons in families with middle incomes at the level of significance (0.05) then sons in families with high incomes come first where cultural factors were more in them, then sons in families with middle incomes in the second place, and finally sons in families with low incomes.

It is clear from the table that there are differences in the environmental factors between sons in families with high incomes and both sons in families with middle and low incomes in favor of sons in families with high incomes at the level of significance (0.01), while there are differences between sons in families with medium incomes and sons in families with low incomes in favor of sons of families with middle incomes at the level of significance (0.05), then the sons of families with high incomes come in the first place where there are more environmental factors then sons of families with middle incomes in the second place, and finally sons of families with low incomes.

It is clear from the table that there are differences in the factors affecting their demand for recycling projects between sons in families with high incomes and both sons in families with middle and low incomes in favor of sons in families with high incomes at the level of significance (0.01), and there are also differences between sons in families with middle incomes and sons in families with low incomes in favor of sons in families with middle incomes at the level of significance (0.01), then the sons in families with high incomes come in the first place, where the factors affecting the youth's interest in recycling projects were more, then sons in families with middle incomes in the second place, and finally sons in low-income families and this is due to the direct relationship between awareness of the factors affecting youth's demand for recycling projects for household consumables

and the level of family income, and this is in agreement with the study of Awadi Mustafa (2017).

Summary of results:

1- The relative weights of the priority factors affecting youth demand for recycling projects are different.

2- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to gender variables.

3- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to the variables of place of residence.

4- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to the variables of specialization.

5- There are statistically significant differences in the responses of the youth of the research sample on the axes of the scale of factors affecting the youth's demand for projects of recycling household consumables (economic, cultural, environmental) according to the variables of monthly income.

Research Recommendations:

Recommendations for the Ministry of Education and the Ministry of Higher Education:

Providing young people with knowledge and skills for recycling household consumables by integrating these skills into the curricula.

Recommendations for the Small Enterprise Development Agency, the Ministry of Social Solidarity and the Social Fund for Development:

- Appealing to the concerned regional authorities, including the League of Arab States, to work on developing integrated regional strategies, policies, work plans and studies aimed at sustainable development.
- Enhancing community education with the importance of the environment and recycling household consumables.
- Encouraging youth to participate in recycling projects for household consumables, as it is beneficial for achieving sustainable development for society as a whole.

Recommendations for the Ministry of Information:

➢ Providing programs through visual and audio media urging the need to conserve and rationalize resources through recycling household consumables and using them to establish small projects.

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